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(1 of 2)

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/106,565
		Filing Date	June 29, 1998
		First Named Inventor	Kenneth M. Martin
		Group Art Unit	2837
		Examiner Name	Karen Masih
Sheet 1 of 1	Attorney Docket Number	IMMR-083/01US	

OIP
 MAY 26 2004
 U.S. PATENT & TRADEMARK OFFICE

U.S. PATENT DOCUMENTS					
Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
IL		6,160,489	12/12/2000	Perry et al.	
		5,690,582	11/25/1997	Ulrich et al.	
		5,575,761	11/19/1996	Hajianpour	
		5,437,607	8/1/1995	Taylor	
		5,436,622	7/25/1995	Gutman et al.	
		5,283,970	2/8/1994	Aigner	
		5,175,459	12/29/1992	Daniel et al.	
		5,165,897	11/24/1992	Johnson	
		5,022,384	6/11/1991	Freels	
		4,885,565	12/5/1989	Embach	
		4,484,191	11/20/1984	Vavra	
		4,464,117	8/7/1984	Foerst	
		4,333,070	6/1/1982	Barnes	
		4,262,549	4/21/1981	Schwellenbach	
		4,127,752	11/28/1978	Lowthorp	

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issu number(s), publisher, city and/or country where published.	
IL		ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance in Telepresence Tasks," Ph.D. Dissertation, Stanford University, June 1994.	
		WIKER, "Teletouch Display Development: Phase 1 Report," Technical Report 1230, Naval Ocean Systems Center, San Diego, July 1986.	
		YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems, Raleigh, NC, July 7-10, 1992	

Examiner Signature		Date Considered	7/6/04
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		Number Kind Code ² (if known)			
1		2,998,822	8/1961	Souza	
		3,942,147	3/1978	Josephson	
		3,988,845	11/1976	Boatman	
		4,023,290	5/1977	Josephson	
		4,101,884	7/1978	Benton, Jr.	
		4,232,724	11/1980	Brown	
		4,242,823	1/1981	Bruno	
		4,438,605	3/1984	DeLucia	
		4,571,834	2/1986	Fraser et al.	
		4,694,533	9/1987	Doyen	
		5,002,727	3/1991	Okimoto et al.	
		5,005,306	4/1991	Kinstler	
		5,261,174	11/1993	Began	
		5,297,057	3/1994	Kramer et al.	

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<i>[initials]</i>		6,422,941	B1	Thorner et al.	07-23-2002
		6,111,577		Zilles et al.	08-29-2000
<i>[initials]</i>		5,186,695		Mangseth et al.	02-16-1993
		2,972,140		Hirsch	02-14-1961

FOREIGN PATENT DOCUMENTS							
Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	T ⁶
		Office ³	Number ⁴	Kind Code ⁵ (if known)			

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² See attached Kinds of U.S. Patent Documents.

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⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document.

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		Examiner Name	Karen Masih		
Sheet	2	of	3	Attorney Docket Number	IMMR-083/01US

OTHER - NON PATENT LITERATURE DOCUMENTS			
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<i>Km</i>		AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992.	
<i> </i>		BLISS, "Optical-to-Tactile Image Conversion for the Blind," IEEE Transactions on Man-Machine Systems, Vol. MMS-11, No. 1, pp. 58-65, March 1970.	
<i> </i>		CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," Bachelor of Science Thesis, MIT, June 23, 1983.	
<i> </i>		"Cyberman Technical Specification," Logitech Cyberman SWIFT Supplement, 4/5/1994.	
<i> </i>		EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," DSC-Vol. 55-1, Dynamic Systems and Control: Volume 1, ASME 1994, pp. 345-351.	
<i> </i>		GOBEL et al., "Tactile Feedback Applied to Computer Mice," International Journal of Human-Computer Interaction, Vol. 7, No. 1, pp. 1-24, 1995.	
<i> </i>		JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," Armstrong Aerospace Medical Research Laboratory, AAMRL-TR-90-039, August, 1990.	
<i> </i>		KACZMAREK et al., "Tactile Displays," Virtual Environment Technologies, pp. 349-414.	
<i> </i>		KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," PRESENCE, Vol. 4, No. 4, pp. 387-402, 1995.	
<i> </i>		LAKE, "Cyberman from Logitech," GameBytes, 1994.	
<i> </i>		NOLL, "Man-Machine Tactile," SID Journal, July/August 1972 Issue.	

Examiner Signature	<i>[Signature]</i>	Date Considered	7/6/04
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Sheet	3	of	3	Attorney Docket Number	IMMR-083/01US

16		OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95, Seoul, Korea, 21-24 August 1995, pp. 309-319.	
↓		PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 nd Edition; McGraw-Hill, ISBN 0-07-050167-X, pp. 41-202, 1994.	
↓		PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," Master of Science Thesis, MIT, Nov. 8, 1990.	

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